

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
7 April 2005 (07.04.2005)

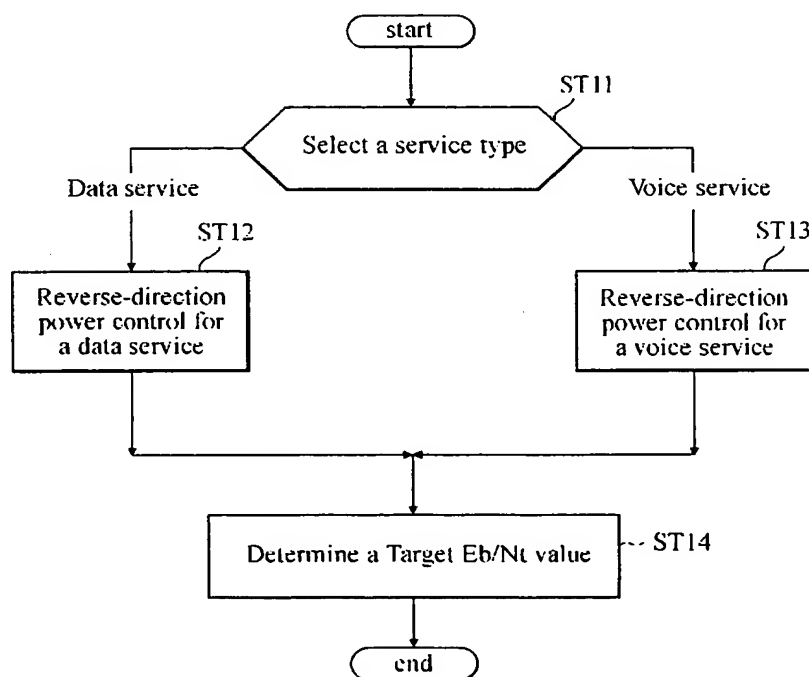
PCT

(10) International Publication Number  
**WO 2005/032010 A1**

- (51) International Patent Classification<sup>7</sup>: **H04B 7/26**
- (21) International Application Number:  
PCT/KR2004/002469
- (22) International Filing Date:  
24 September 2004 (24.09.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10-2003-0067736  
30 September 2003 (30.09.2003) KR
- (71) Applicant (for all designated States except US): **UTSTAR-COM KOREA LIMITED** [KR/KR]; San 136-1, Ami-ri, Bubal-eub Icheon-si, Kyongki-do 467-701 (KR).
- (72) Inventor; and  
(75) Inventor/Applicant (for US only): **SONG, Tae Ik** [KR/KR]; Hyundai Apt. 105-905 Sadong-ri, Dae-wol-myeon Icheon-si, Gyeonggi-do 467-860 (KR).
- (74) Agent: **YOON, Jee Hong**; Hannuri Bldg. 219 Naeja-dong, Chongno-gu, Seoul 110-053 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: METHOD OF CONTROLLING POWER IN A CDMA-2000 SYSTEM



(57) Abstract: The present invention is directed to a method of controlling power in a CDMA-2000 system. In a conventional CDMA-2000 system, a reverse-link power control algorithm has been employed, which is optimized only for voice communication. The purpose of the reverse-link power control for voice communication is to maintain the error rate of the frame received in the reverse channel below a certain rate (typically, an error rate of 1%). As such, the reverse-link power control algorithm for voice communication is not suitable for a data service, the throughput of which needs to be maximized. Based on the above observation, the present invention suggests a method of implementing different algorithms according to the service type to be provided through a CDMA-2000 system. That is, if the service type is a voice service, the conventional reverse-link power control algorithm that is used for an IS-95A or IS-95B CDMA system is employed at a Base

Station Subsystem (BTS). However, if the service type is a data service, a target Energy per Bit / Noise Total (Eb/Nt) value for each of a reverse fundamental channel and a reverse supplemental channel is determined based on the statuses of the frames received in the reverse channels. With the suggested method, the present invention can optimize the power control algorithm for both the voice service and the data service. Thus, the throughput in the data service can be enhanced.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— with international search report